

PRELIMINARY IOWA WEATHER SUMMARY – JANUARY 2014

General Summary. Temperatures averaged 13.9° or 5.5° below normal while precipitation totaled 0.43 inches or 0.49 inches less than normal. This ranks as the 35th coldest and 19th driest January among 142 years of records. A colder calendar month was last recorded in January 2010 and a drier one in November 2007.

Temperatures. A very persistent weather pattern prevailed through the month bringing the coldest air frequently to northeastern Iowa where temperatures averaged 6 to 10 degrees below normal. Meanwhile occasional brief periods of strong southwesterly winds allowed quick warm-ups across the far west where temperatures averaged only 2 to 4 degrees below normal. The statewide average daily temperature was twenty or more degrees below normal on the 2nd, 5th, 6th, 23rd, 27th and 28th. Each of these cold episodes was accompanied by strong winds, resulting in wind chills falling to -34° or lower. Wind chills bottomed out at -51° on the morning of the 6th at Mason City and Oelwein. These were the lowest wind chills recorded in Iowa since January 2, 2010 when Estherville recorded a -53° reading. Actual temperatures fell as low as -29° at Elkader on the morning of the 28th. On the other extreme temperatures climbed to daily record highs of 65° at Little Sioux, Logan and Sioux City on the 19th. However, persistent snow cover over the northeast counties did not allow temperatures to climb above 38 degrees during the month at Dubuque and Oelwein.

Heating Degree Days. Home heating requirements, as estimated by heating degree day totals, averaged 19% greater than last January and 13% greater than normal. Degree day totals so far this heating season (since July 1) have averaged 15% greater than one year ago and 9% greater than normal. This has been the coldest start to the heating season in 17 years.

Precipitation. Precipitation was rather frequent during January, especially over northeast Iowa, but amounts were nearly always on the light side. Burlington reported the largest storm total with 5.0 inches of snow on the 4th-5th. Monthly snow totals varied from 1.0 inches at Glenwood (all of which fell on New Year's Day) to 18.1 inches at Elkader. There was little if any snow cover over much of the southwest one-half of the state during January while the northeast one-quarter of the state has endured continuous snow cover since December 8, with a snow depth of 10 to 20 inches being common at month's end.

Severe Weather. Despite the lack of heavy snow, high winds combined with relatively light snowfall to produce blizzard conditions over portions of central Iowa on the 16th and over northeast and east central areas on the 26th. Prolonged cold weather, combined with little, if any, snow cover has allowed soils under sod to freeze to depths of 20 to 27 inches across the state by month's end according to National Weather Service measurements. Iowa DOT sensors show the ground under pavement to be frozen from three to four and one-half feet below the

surface. The deep frost has resulted in hundreds over water mains breaks across the state. Unfortunately, the frost depth typically goes even deeper during February. Meanwhile the prolonged cold has resulted in a record spike in propane prices owing to a combination of high demand and low supply. Finally, January has been an exceptionally windy month. At Des Moines wind gusts exceeded 40 mph on eight days during the month. The average wind speed for the month was 13.5 mph. Owing to changes in wind measurement equipment and procedures over the years it is difficult to make 'apples to apples' historical comparisons but at Des Moines this was the highest calendar month wind speed average since March 1986.

Harry J. Hillaker
State Climatologist
Iowa Dept. of Agriculture & Land Stewardship
Wallace State Office Bldg.
Des Moines, IA 50319
Telephone: (515) 281-8981
E-mail: Harry.Hillaker@IowaAgriculture.gov